

Arctic Seafloor Mapping Project Web Site - [arcticseafloormapping.gov](http://arcticseafloormapping.gov)

## Part 2: Stuck in the Ice—Louis Goes with the Floe

August 22, 2010

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ECS Project

Date: August 22, 2010  
 Time: 1809 hours Pacific Daylight Time  
 Latitude: 78°23.80'N  
 Longitude: 150°34.15'W  
 Air temperature: 6.46°C (43.63°F)  
 Sea temperature: -1.3°C (29.7°F)  
 Wind speed and direction: 5.9 knots from the northeast  
 Ship's speed over the ground: 4.2 knots  
 Water depth: 3,829 m

*Louis* got stuck on an ice floe this afternoon—one tough floe under her port bow, which dragged her around in a big counterclockwise loop while she tried to maneuver off the floe without pulling in her seismic gear. With all the gear in the water—three pneumatic sound sources and a 100-m streamer of hydrophones being towed from the stern—*Louis* couldn't reverse, she couldn't use her center propeller, and she couldn't even use full power with her port and starboard propellers. After about an hour and a half of unsuccessful attempts to move off the floe, her crew pulled in the seismic gear and put on extra power to push free of the ice.

*Louis* got stuck shortly after four visitors from *Healy*—Caroline Singler (NOAA Teacher at Sea), Bill Schmoker (PolarTREC), CDR John Reeves, and ENS Holly McNair—had arrived via helicopter. Luckily, the unexpected operations did not disrupt their visit, and the four not only saw how their counterparts live and work on *Louis* but also got an unexpected opportunity to take photos of *Healy* as she broke ice near *Louis* to help set her free.

Here are some photos from the afternoon:



*Louis* is stuck on an ice floe beneath her port bow. When ice-breaking, *Louis* pushes her bow up onto the ice and then crushes down through it. The bubbles from her bubbler system (visible along the hull forward of the white stripe) help move the broken pieces away from the ship. This time, *Louis* rode up on a tough ice floe that did not break. Click image for larger view. **Credit:** Brian Edwards, USGS.



So near and yet so far. *Louis* is



The afternoon's tracklines record a goofy dance between the ships, as *Healy* tries to help free *Louis* by breaking ice around her. *Louis* was stopped



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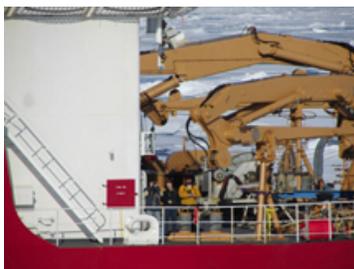


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just a few meters away from clear water, but the ice floe under her port bow won't give way. Moving forward, *Louis* simply pushes the floe in front of her. Click image for larger view. **Credit:** Frame from video by Brian Edwards, USGS.



*Louis* and *Healy's* dance in the ice brought the ships much nearer to one another than usual, giving people on each ship close-up views of the other. This view of *Louis's* stern shows the tow cable to the seismic gear, which hampered *Louis's* speed and maneuverability while she tried to break free of the ice. Click image for larger view. **Credit:** Brian Edwards, USGS.



Close-up view of *Healy's* main deck; the stern is to the right. (You can just see the blue track used to move corers to the edge of the stern for deployment.) Looking back at *Louis* are (right to left) USGS marine technicians Pete Dal Ferro and Jenny White, and seismic technician Jamison Etter, visiting from *Louis*. Click image for larger view. **Credit:** Caroline Singler, NOAA Teacher at Sea.



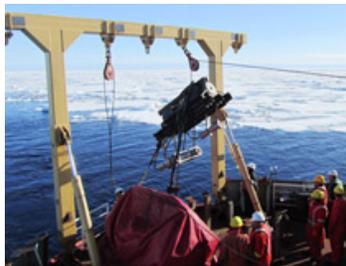
...and then the lead-in cable (yellow) and hydrophone

The personnel exchange between the two ships lasted a little longer than expected, but by late afternoon, all the visitors had been returned to their own ships. By about 1745 hrs, the seismic gear was back in the water, and we were once more underway.

by the ice at 1343 hrs PDT. By the time this screenshot was taken at 1655 hrs, *Louis's* seismic gear had been pulled aboard and the crew had put on extra power to break the ship free. (Labeled screenshot from science intranet Map Server. *Healy's* trackline has been changed from red to yellow for easier visibility.) Click image for larger view. **Credit:** Helen Gibbons, USGS/ECS Project.



The visitors from *Healy* took advantage of the opportunity to photograph their ship across the ice. Click image for larger view. **Credit:** Caroline Singler, NOAA Teacher at Sea.



At about 1530 hrs, *Louis's* crew was pulling in the seismic gear. First the pneumatic sound sources... Click image for larger view. **Credit:** Caroline Singler, NOAA Teacher at Sea.



Peter Triezenberg (USGS) and I saw the helicopter from *Louis* return to *Healy* a little after 1600 hrs, thanks to a video feed from the flight deck to the Computer Lab, where we monitor data coming in from *Healy's* mapping systems. Click image for larger view. **Credit:** Frame from video shot by Peter Triezenberg, USGS.



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streamer (blue). Once the gear was on deck, *Louis's* crew was able to maneuver her out of the ice. Click image for larger view.  
**Credit:** Caroline Singler, NOAA Teacher at Sea.

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